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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/392,208	09/08/1999	WILLIAM CLAYTON SCOFIELD	OXMO-24.721	9767

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EXAMINER
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BRINEY III, WALTER F

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/392,208

Applicant(s)

SCOFIELD ET AL.

Examiner

Walter F. Briney III

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15, 17-33, 35-45, 47, 49-54 and 56-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15, 17-33, 35-45, 47, 49-54 and 56-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 21 June 2006 has been entered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 15, 21, 27-30, 32, 33, 39, 47, 51, 54, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamatsu (US Patent 5,524,053) in view of Gehring (US Patent 5,521,981) and further in view of Blauert et al. (US Patent 3,962,543).**

**Claims 15, 21, 27-30, 32, 33, 39, 47, 51, 54 and 58** have been amended to eliminate those limitations determined to be new matter. In effect, elimination of those limitations rolls back the claims to the versions rejected in the Non-Final Office Action filed 25 November 2005, and as such, the claims are rejected for at least the same

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reasons presented in said Non-Final Office Action. In addition, the applicant has added several new limitations that are treated below.

In contrast with the earlier versions of the independent claims 1, 33, 47 and 54 that recited "playing the left and right output signals through respective left and right loudspeakers of a localized speaker headset at the listening position," the current versions of said claims recite "playing through respective left and right loudspeakers of localized speaker headsets at the plurality of listening positions."

The current versions of the claims have not been shown to be disclosed, taught or suggested by Iwamatsu alone or in combination with Gehring. Instead, Iwamatsu in view of Gehring have been shown to teach reproducing a surround signal over merely two speakers 84 and 86, which have been shown to be obviously replaceable with a headset. Therefore, the only difference between the prior art of record and the current claims is that the claims require the duplication of one part: a speaker headset.

However, such a difference fails to meet the requirements of patentability set forth in 35 U.S.C. 103(a) and *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960), which concludes that, "although the reference did not disclose a plurality of ribs, the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced." It is submitted that playing the same output signals over a plurality of headsets predictably duplicates the effect of sound reproduction over a single headset: allowing more than one person to perceive a virtual positioned audio signal.

It follows that after playing the left and right output signals generated by the combination of Iwamatsu and the HRTF of Gehring through a plurality of headsets at the plurality of listening positions, which are inherently provided by the presence of a plurality of headsets, "the left and right output signals provide a sound source at each of the plurality of listening positions appearing to have a constant virtual distance between the central listening position and each of the plurality of virtual locations."

It would have been obvious to one of ordinary skill in the art at the time of the invention to duplicate the headset used for sound reproduction in the combination of Iwamatsu and Gehring as the mere duplication of parts has no patentable significance unless a new and unexpected result is produced.

It is further noted the independent claims recite "processing a non-binauralized input sound signal...to provide a plurality of sound signals...corresponding to one of a plurality of virtual locations disposed in an azimuthal plane with respect to a central listening position." As seen in figure 6 of Iwamatsu, processor 28 serves in part to down mix the surround sound signal 10 with respect to "a central listening position" 82. Therefore, Iwamatsu in view of Gehring makes obvious all limitations of the claim.

2. **Claims 31 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamatsu in view of Gehring in view of Blauert and further in view of Begault (US Patent 5,173,944).**

**Claims 31 and 45** are rejected for the same reasons presented in the Non-Final Office Action filed 25 November 2005 and the grounds of rejection presented in section 2 of this action.

3. **Claims 18-20, 36-38, 50, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamatsu in view of Gehring in view of Blauert and further in view of Görke (US Patent 4,158,753).**

**Claims 18-20, 36-38, 50 and 57** are rejected for the same reasons presented in the Non-Final Office Action filed 25 November 2005 and the grounds of rejection presented in section 2 of this action.

4. **Claims 17, 22-26, 35, 40-44, 49, 52, 53, 56, 59, and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamatsu in view of Gehring in view of Blauert and further in view of Miyamori et al. (US Patent 5,537,165).**

**Claims 17, 22-26, 35, 40-44, 49, 52, 53, 56, 59 and 60** are rejected for the same reasons presented in the Non-Final Office Action filed 25 November 2005 and the grounds of rejection presented in section 2 of this action.

### ***Response to Arguments***

Applicant's arguments filed 21 June 2006 with respect to claims 15, 17-33, 45-45, 47, 49-54 and 56-60 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F. Briney III whose telephone number is 571-272-7513. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**SINH TRAN**  
**SUPERVISORY PATENT EXAMINER**

WFB